

POPE of Major Schemes Summary Report

Scheme Title	A428 Caxton Common to Hardwick Improvement
Opening Date	May 2007
POPE Stage	One Year After

Scheme Description

The improvement scheme was the dualling of two sections of single carriageway on the A428 west of Cambridge near the new settlement of Cambourne. It consisted of the following measures:

- 0.9 miles of new dual carriageway between A1198 at Caxton Gibbet roundabout and existing dual carriageway at Cambourne and 3.8miles of new dual carriageway between Cambourne and the existing dual carriageway east of Hardwick;
- Replacement of a roundabout with a grade-separated junction at Hardwick village;
- Conversion of most of former route of A428 to be a local access road; and
- Environmental mitigation measures.

Objectives (Statement of Case)

Objective Achieved?

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|---|--|
| <ul style="list-style-type: none"> • To develop environmentally acceptable, well-engineered, economical and safe proposals to provide additional traffic capacity on the A428. | Yes, but too soon to judge all environmental impacts |
| <ul style="list-style-type: none"> • To be compatible with proposals along the route for access to new housing and commercial developments [in Cambourne] funded by S278 agreements. | Yes |
| <ul style="list-style-type: none"> • To minimise private means of access and side road connections to the trunk road consistent with making other satisfactory arrangements for the traffic. | Yes |

Key Findings

- Based on the information available at this point in time, this scheme has met its objectives.
- Safety impacts have been much better than expected. This has largely been achieved by the absence of side road junctions onto the new route and maintaining the old route for use by local vehicles.
- Inaccurate traffic flows in the modelling resulted in an underestimate of safety benefits emerging from this scheme.
- Additional traffic on the A428 corridor can be attributed to three key factors:
 - The A428 becoming more attractive than parallel routes including the A14, for some users;
 - Traffic associated with new development at Camborne; and
 - Background growth on the general network.
- The growth in traffic on the A428 corridor as a whole however, was lower than forecast. The limited data available suggests that this could be attributable to overestimating the degree of rerouting from the A14; some discrepancies in route choice assumptions associated with development at Cambourne.
- This scheme offers a positive example of where the impact of other schemes has been considered.
- Footpaths have generally been provided in line with the Environmental Statement (ES), but equestrian facilities have not been provided as expected.

- Although landscape impacts are generally as expected, changes to the scheme on site e.g. inclusion of bunds and omission of some planting has localised impacts on the landscape character and visual amenity which were not considered within the ES.
- The County Council raised some concerns regarding the ES consultation process for Heritage.

Summary of Scheme Impacts

Traffic

- Traffic on the old route decreased by up to 82% (4,700 vehicles) and observed post opening flows were 40% lower than expected;
- Upon opening, there was a large rise in traffic using the A428 corridor due to some strategic traffic re-routing from the A14 north west of Cambridge and local roads and new traffic generated by the Cambourne Development; although this was less than expected prior to opening;
- Journey time savings of 1.6 and 4.5 minutes have been observed, this was 13-26% higher than forecast; and
- Following scheme opening there was less variability in journey times throughout the day indicating thus representing reduced congestion and better journey time reliability.

Safety

- A statistically significant reduction (three times that forecast) in accidents in the A428 corridor was observed in the opening year – this equates to an opening year saving of 22 accidents; and
- No fatal or serious accidents occurred within the A428 corridor during the opening year.

Environment

- The scheme's impact on the environment was generally as forecast;
- In line with expectations, the scheme has increased Greenhouse gas emissions due to growth in corridor traffic and higher vehicle speeds;
- The construction of a blue footbridge across the A428 has had a slight adverse impact on the visual landscape, as have added bunds implemented to screen the road – such impacts are however in line with expectations;
- It is too early to evaluate the effectiveness of planting schemes on the visual landscape;
- No evidence was available to quantify the expected increase in cycling and walking activity on local routes.
- Equestrian crossing facilities were not installed in line with the Environmental Statement, and as such impact on such users was slightly worse than expected.

Accessibility

- Through the removal of a large percentage of traffic, the A428 improvements have had the desired impact of reducing severance on the old A428; and
- Removal of traffic on the old A428 is likely to have assisted in improving bus journey time reliability and has enhanced the waiting environment for bus users along the route.

Integration

- The scheme is consistent with regional policies to enhance east-west transport links across the region.

Summary of Scheme Economic Performance

All prices in 2002 prices, discounted to 2002 at 3.5%	60 years (includes impact of proposed A14 Ellington-Fen Ditton scheme)	First 10 years only (no changes to A14 ²)	
	Pre-scheme forecast	Pre-scheme forecast	Post opening Reforecast based on observed data
Present Value Benefits ¹	£227m	£104.8m	at least £59.5m
Present Value Cost	£36m	£36.4m	£41.4m
Benefit Cost Ratio	6.2	2.9	at least 1.4

¹ Benefits based on forecast savings in accident reduction and improved journey times. Evaluation of accident benefits is based on the COBA wide area. The evaluation of the vehicle hour savings only refers to link transit benefits on the A428. Hence these numbers represent an underestimate of the true benefits.

² Currently some traffic uses the A428 as an alternative to the congested A14. Hence the usage of this scheme and associated levels of long term economic benefits are linked to future plans for the A14. At the time this study was done, there was a proposed scheme to widen this part of the A14, and so this evaluation was based on the time period up to the completion of the proposed scheme rather than the full 60 years. These proposals have since been withdrawn hence there will be higher benefits from A428 improvements scheme so the figures presented here represent a conservative estimate of the benefits.

- Half of the 60 year economic benefits of the scheme were expected to arise before 2015, i.e. the period with no change to the A14;
- The outturn cost of building the scheme was 13% higher than forecast;
- The lower than expected transfer of traffic from A14 into the A428 corridor has resulted in lower than expected monetised journey time benefits;
- The benefit cost ratio for the first 10 years of the scheme is half that expected over the same period; and
- Monetary benefits derived from observed accident savings were three times the level expected.

This document summarises the findings of the one year after post opening evaluation study completed in July 2009.